IN THE CLAIMS:

1. (Currently Amended) A method for predicting the onset of a medical condition in a human patient, comprising:

measuring [[a]] concentration ~~level~~ levels of at least one breath ~~gases~~ gas exhaled by the patient over a period of time; [[and]]

comparing said measured concentration ~~level~~ levels with [[a]] predetermined concentration ~~level~~ levels indicative of an onset of said medical condition; and

wherein said medical condition is selected from a set of medical conditions including pain and the occurrence of a stroke.

2. (Cancelled)

3. (Cancelled)

4. (Currently Amended) The method of Claim 1 for predicting the onset of a medical condition further including the step of generating ~~an index~~ a profile responsive to said measured concentration ~~level~~ levels, said ~~index~~ profile representative of a likelihood of onset for said medical condition.

5. (Original) The method of Claim 1 for predicting the onset of a medical condition wherein said measuring step includes measuring a concentration of carbon monoxide breath gas exhaled by the patient.

6. (Currently Amended) A method for predicting the onset of one or more sickle-cell anemia related pathologies in a human patient having sickle-cell anemia, comprising:

measuring a concentration ~~levels of one or more breath gases~~ level of at least one breath gas exhaled by the patient over a period of time; and

comparing said measured concentration levels with a predetermined concentration ~~levels~~ profile indicative of an onset of ~~one or more selected~~ at least one sickle-cell pathology.

7. (Original) The method of Claim 6 wherein said sickle-cell anemia pathologies include one or more pathologies from a set of pathologies including pain, anemia, stroke, or infection.

8. (Currently Amended) The method of Claim 6 wherein each of said one or more selected sickle-cell anemia related pathologies are each influenced by a decreased ~~nitrous oxide~~ nitric oxide (NO) bioavailability.

9. (Currently Amended) A method for predicting the onset of at least one (NO)-related negative influence in a human patient, comprising:

measuring a concentration ~~levels of one or more breath gases~~ level of at least one breath gas exhaled by the patient over a period of time; [[and]]

comparing said measured concentration levels with a predetermined concentration ~~levels~~ profile indicative of an onset of at least one selected (NO)-related negative influence; and

wherein said at least one selected (NO)-related negative influence is associated with an ivHb-dependent decrease in (NO) bioavailability.

10. (Currently Amended) The method of Claim 9 wherein said (NO)-related negative influence ~~include~~ includes (NO)-related negative influences of hemolysis in a human patient and (NO)-related negative influences of chronic hereditary hemolytic disease in a human patient.

11. (Original) The method of Claim 10 wherein said one or more (NO)-related negative influences of chronic hereditary hemolytic disease include one or more pathologies from a set of pathologies including pulmonary hypertension, cutaneous ulceration, renal failure, thrombotic thrombocytopenic purpura, and malaria.

12. (Cancelled)

13. (Currently Amended) An apparatus for predicting the onset of a medical condition in a human patient, comprising:

means for measuring [[a]] a plurality of concentration levels of at least one breath gas exhaled by the patient; [[and]]

means for comparing said measured concentration ~~level~~ levels with at least one predetermined concentration ~~level~~ profile indicative of an onset of said medical condition; and

wherein said medical condition is selected from a set of medical conditions including pain and the occurrence of stroke.

14. (Original) The apparatus of Claim 13 wherein said means for comparing includes a logic circuit.

15. (Currently Amended) The apparatus of Claim 13 further including a display operatively coupled to said means for comparing;

wherein said means for comparing is further configured to generate an ~~index~~ profile responsive to said measured concentration ~~level~~ levels, said ~~index~~ profile representative of a likelihood of onset for said medical condition; and

wherein said means for comparing is further configured to control said display to display said ~~index~~ profile.

16. (Cancelled)

17. (Cancelled)

18. (Original) The apparatus of Claim 13 wherein said means for measuring is configured to measure a concentration of carbon monoxide breath gas exhaled by the patient.